

Application No.: 09/725,156

Docket No.: 00-VE12.25

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (currently amended) A method of providing voice grade telephone service to a plurality of subscribers using existing telephone loop facilities, comprising the steps of:

configuring said telephone loop facilities to provide a plural number of digital subscriber line (DSL) ~~services~~ circuits between (i) a DSLAM connected to said telephone loop facilities ~~facility~~ and (ii) a remote facility ~~using respective DSL circuits~~;

assigning a plurality of subscriber lines to each of said number of DSL circuits;

receiving calls to said plurality of subscriber lines at a next generation network, said next generation network including a switched voice gateway and at least one digital packet switched routing system, the calls received from a circuit switch terminating said calls and connected to the next generation network;

routing said calls ~~terminating at a central office~~ to an associated DSL digital loop carrier circuit via said DSLAM, said DSLAM connected to the next generation network;

transmitting said calls to said remote facility on said DSL circuit;

receiving said calls at said remote facility at ~~transmitting calls on said DSL circuits to~~ respective Packet Voice Devices (PVDs) located at said remote facility;

converting said calls on said DSL circuits to respective analog Plain Old Telephone Service (POTS) signals by and at said PVDs;

transmitting said POTS signals to respective NIDs located at a plurality of premises of respective ~~nearby~~ ones of said subscribers over respective copper loop facilities connecting said PVDs to said NIDS and therethrough to respective telephone equipment of said subscribers; and

completing said calls from said PVDs to said ~~nearby~~ ones of said subscribers.

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2. (original) The method of claim 1 further comprising the step of supplying power to said PVDs independent of a local commercial power source.

3. (currently amended) The method of claim 1 further comprising the step of installing said DSLAMs ~~DSLs~~ at offsite locations near respective groups of said subscribers being served by said DSL circuits ~~DSLs~~.

4. (currently amended) The method of claim 3 ~~1~~ further comprising the step of ~~installing said DSLs at one or more remote~~ wherein said DSLAMs ~~DSLAM Terminals which in turn supply Serving Area Interfaces (SAIs).~~

5. (currently amended) The method of claim 1, wherein configuring said telephone loop facilities includes ~~further comprising the step of installing~~ connecting said DSL circuits ~~DSLs~~ at distribution cable interface ends of respective drop wires wherein opposite ends of said drop wires are connected to said NIDs located on the premises of respective ones of said subscribers.

6. (currently amended) In an existing switched telephone network comprising a plurality of central offices connected by interoffice facility trunks, each central office providing service via a circuit switch to ~~nearby~~ subscribers connected by local loop facilities, the local loop facilities including a feeder distribution system connecting the central offices to respective serving area interfaces and local drops connecting respective subscribers to said serving area interfaces, and further comprising a number of DSLAMs connected to the circuit switch by a next generation network, the next generation network including a switched voice gateway and at least one digital packet switched routing system, the DSLAMs further connected to the local loop facilities to provide digital subscriber line (DSL) services, a method of expanding the capabilities of the feeder distribution to accommodate additional subscribers, comprising the steps of:

~~configuring said feeder/distribution system to provide~~ providing plural digital subscriber loops (DSL circuits [()]) between said ~~central offices~~ number of DSLAMs and said ~~serving area interfaces using respective DSL circuits;~~

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~~terminating said DSL circuits at respective Packet Voice Devices (PVDs), said PVDs located at remote DSLAM terminals;~~

connecting respective analog Plain Old Telephone Service (POTS) signal outputs of said ~~PVDs DSLAM terminals~~ to existing copper loop facilities providing connectivity with distant network interface devices (NIDs) remotely located at respective premises of said subscribers; and

assigning a plurality of subscriber lines terminating at said circuit switch to each of said DSL circuits; and

connecting a call to a called subscriber, the called subscriber associated with one of the plurality of subscriber lines, via the circuit switch, the next generation network, one of the number of DSLAMs, one of the respective PVDs and the NID at the premises of the called subscriber.

7. (currently amended) The method according to claim 6, wherein connecting the call to the called subscriber includes further comprising the steps of:

receiving said call at the switched voice gateway from the circuit switch;

routing ~~said call calls terminating at a central office~~ to an associated one of said DSL circuits via the one of the number of DSLAMs;

transmitting ~~said call calls~~ on said one of said DSL circuits to the one of the respective Packet Voice Devices (PVDs [()]) located at said remote facility;

converting said ~~call calls on said DSL circuits~~ to respective analog Plain Old Telephone Service (POTS [()]) signals by and at said one of the respective PVDs;

transmitting said POTS signals to said respective NIDs located at a plurality of the premises of the called subscriber ~~respective nearby ones of said subscribers~~ over said ~~respective copper loop facilities connecting said PVDs to said NIDs and therethrough to~~ ~~respective telephone equipment of said subscribers;~~ and

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~~completing voice calls from said PVDs to said nearby ones of said subscribers over respective copper loop facilities.~~

8. (currently amended) The method according to claim 6 further comprising the steps of:

detecting an off-hook condition present on one of said local drops;

transmitting dial tone from said central office to said local drop via an associated one of said DSL circuits;

collecting dialed digits at said central office, dialed digits received from said local loop and transmitted to said central office by way of said associated one of said DSL circuits; and

completing a voice call to a telephone number corresponding to said dialed digits via the DSL circuit, the voice switched gateway and the circuit switch.

9. (original) The method according to claim 8 wherein said steps of transmitting includes in-band signaling using said associated one of said DSL circuits, and said completing step includes establishing a full-duplex voice circuit also using said associated one of said DSL circuits.

10. (currently amended) A telephone system comprising:

network switching facilities including

(i) a switched voice gateway interfaced to a digital switch providing circuit-switched telephone service to a plurality of subscribers via local loop transmission facilities,

(ii) at least one digital packet switched routing system interfaced to the switched voice gateway, the at least one digital packet switched routing system including a Next Generation Switch,

(iii) a digital subscriber line access multiplexer (DSLAM) coupled to said switched voice gateway via the at least one digital packet switched routing system digital switch;

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~~local loop transmission facilities connected to said DSLAM; and~~

a PVD connected (a) to said DSLAM via said local loop transmission facilities and (b) to a plurality of copper loops, each of said copper loops terminated at respective network interface devices (NIDs) associated with and remotely located at the premises of respective ones of said subscribers for providing analog POTS voice telephone service to said subscribers.

11. (previously presented) The telephone system according to claim 10 wherein said digital switch comprises a device selected from the group consisting of a packet and voice switch.

12. (original) The telephone system according to claim 10, further comprising a power supply connected to said local loop transmission facilities and supplying electric operating power thereover to said PVD.

13. (currently amended) The telephone system according to claim 10 wherein digital switch includes (i) a digital interface connected to said DSLAM via said network switching facilities, and (ii) a plurality of line cards connected to provide telephone service to another plurality of subscribers.

14. (currently amended) The telephone system according to claim 13 wherein said local loop transmission network switching facilities further include a main distribution frame (MDF) ~~connected to said local loop transmission facilities~~ to transmit signals (i) between said DSLAM ~~[[an]] and said copper loops loop transmission facilities~~ and (ii) between said line cards and other copper loop facilities associated with said another plurality of subscribers.

15. (currently amended) The telephone system according to claim 10, wherein the at least one digital packet switched routing system further includes ~~comprising~~ a packet switch coupling said DSLAM to said switched voice gateway digital switch.

16. (original) The telephone system according to claim 10 wherein said PVD further comprises a weatherproof outdoor enclosure having mounted therein a plurality of line modules connected to corresponding copper loops, each of said copper loops extending and connecting to a corresponding one of said subscribers.

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